

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 12-38 are pending in the application, with claims 12, 18, and 25 being the independent claims. New claims 31-38 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Weber in view of Cliff

Claims 12, 15, 16, 18-20, and 25-27 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over United States Patent Publication No. 2003/0129791 to Weber et al. (herein "Weber") in view of United States Patent Publication No. 2001/0017595 to Cliff et al. (herein "Cliff"). Applicants respectfully traverse the rejection and provide the following arguments to support patentability.

Claim 12, as amended, is patentable over the art of record. For example, as to be discussed below, the combination of Weber and Cliff does not teach nor suggest at least the features of "a plurality of ports, wherein said plurality of ports includes at least one parallel port and at least one serial port" and/or "a bus connecting said plurality of ports on a common substrate, wherein said bus is configured to enable data to travel between said at least one parallel port and said at least one serial port" as recited by claim 12.

Weber discloses a "system and method for implementing [a single-thread, multi-speed (STMS)-multi-thread, single-speed (MTSS)-dual-mode] interconnect protocol method with shared resources on a single die." (*see*, Weber, para. [0003]). According to Weber, a controller "may convert an internal parallel word into at least one serial differential bit stream on a transmission function and may convert at least one serial differential bit stream to an internal parallel word on a reception function." (*see*, Weber, para. [0014]; *see also*, Weber, paras. [0022]-[0024]). Thus, Weber merely discloses converting internal parallel words to external serial differential bit streams and converting external serial differential bit streams to internal parallel words. The system of Weber is not capable of transmitting an external parallel word with the transmission function and receiving an external parallel word with the reception function. Therefore, Weber does not teach nor suggest at least the features of "a plurality of ports, wherein said plurality of ports includes at least one parallel port and at least one serial port" and/or "a bus connecting said plurality of ports on a common substrate, wherein said bus is configured to enable data to travel between said at least one parallel port and said at least one serial port" as recited by claim 12. Cliff does not provide the missing teachings or suggestions with respect to claim 12, nor does the Office Action allege that Cliff provides the missing teachings or suggestions with respect to claim 12 to render claim 12 obvious. Dependent claims 15 and 16 are likewise not rendered obvious by the combination of Weber and Cliff for the same reasons as claim 12 from which they depend and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 12, 15, and 16 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

The combination of Weber and Cliff does not teach or suggest each and every feature of claim 18. For example, as to be discussed below, Weber does not teach or suggest at least the features of "sending a second control signal to instruct said programmable pad, configurable to function as an output or an input based on said protocol and electrical specification instructions, after executing said protocol and electrical specification instructions" as recited by claim 18. Cliff does not provide the missing teachings or suggestions with respect to claim 1, nor does the Office Action allege that Cliff provides the missing teachings or suggestions with respect to claim 1 to render claim 1 obvious. Therefore, the Office Action fails to support a *prima facie* case of obviousness.

The Office Action alleges that "data presenters 460-463, aggregators 440-443, and corresponding encoders 470-473/decoders 420-423" of Weber teach or suggest "a programmable pad" as recited by claim 18. (*see*, Office Action, Page 4). The data presenters 460-463, aggregators 440-443, and corresponding encoders 470-473/decoders 420-423 each have a defined output and/or input that is not configurable. According to Weber, the parallel data is decoded by decoders 420-423 and delivered to buffers 430-433." (*see*, Weber, para. [0024]). The aggregators 440-443 "receive data stored in buffers 430-433 and align the data properly according to a desired protocol definition." (*see*, Weber, para. [0023]). The data presenters 460-463 "may perform an algorithm on the data to present data according to a desired protocol." (*see*, Weber, para. [0024]). After the data has been modified according to the desired protocol definition, the data stream is transferred to encoders 470-473 for encoding. (*see*, Weber, para. [0025]). The

encoders 470-473 encode the data stream "according to the desired protocol definition."
(*see*, Weber, para. [0025]).

In contrast to Weber, claim 18 recites "sending a second control signal to instruct said programmable pad, configurable to function as an output or an input based on said protocol and electrical specification instructions, after executing said protocol and electrical specification instructions." (*emphasis added, see*, claim 18). For example, Applicants' Specification states that a programmable pad is allowed

to change its originally designated function (i.e., input or output). For example, if pad 602 is originally designated as an output pad, the pad 602 is reconfigured to operate as an input pad upon receipt of a reset message.

(*see*, Applicants' Specification, para. [0056]).

Thus, the programmable pad being "configurable to function as an output or an input based on said protocol and electrical specification instructions" is neither taught nor suggested by Weber. Cliff does not provide the missing teachings or suggestions with respect to claim 18, nor does the Office Action allege that Cliff provides the missing teachings or suggestions with respect to claim 18 to render claim 18 obvious. Dependent claims 19 and 20 are likewise not rendered obvious by the combination of Weber and Cliff for the same reasons as claim 18 from which they depend and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 18-20 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

The combination of Weber and Cliff does not teach or suggest each and every feature of claim 25. For example, as discussed above in regards to claims 12 and 18, the combination of Weber and Cliff does not teach or suggest at least the features of "control logic for executing said protocol instructions to configure said programmable pad, such

that said programmable pad is configured to function as an output or an input based on said protocol and electrical specification instructions and to either send or receive data after having been configured to comply with said data protocol and said electrical specification" as recited by claim 25. Dependent claims 26 and 27 are likewise not rendered obvious by the combination of Weber and Cliff for the same reasons as claim 25 from which they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 25-27 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Weber and in view of Cliff and further in view of Rearick

Claims 17, 21, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Weber in view of Cliff and in further view of United States Patent Publication No. 2003/0172332 to Rearick (herein "Rearick"). Applicants respectfully traverse the rejection and provide the following arguments to support patentability.

As discussed above, the combination of Weber and Cliff does not teach or suggest each and every feature of claims 12 and 18. Rearick does not provide the missing teachings or suggestions with respect to claims 12 and 18. Thus, the combination of Weber, Cliff, and Rearick does not render obvious claims 12 and 18. Dependent claims 17, 21, and 28 are likewise not rendered obvious by the combination of Weber, Cliff, and Rearick for the same reasons as the independent claims from which they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 17, 21, and 28 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Weber and in view of Cliff and further in view of Taniguchi

Claims 13, 22-24, 29, and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Weber in view of Cliff and in further view of United States Patent Publication No. 2003/0172332 to Taniguchi (herein "Taniguchi"). Applicants respectfully traverse the rejection and provide the following arguments to support patentability.

As discussed above, the combination of Weber and Cliff does not teach or suggest each and every feature of claims 12, 18, and 25. Taniguchi does not provide the missing teachings or suggestions with respect to claims 12, 18, and 25. Thus, the combination of Weber, Cliff, and Taniguchi does not render obvious claims 12, 18, and 25. Dependent claims 13, 22-24, 29, and 30 are likewise not rendered obvious by the combination of Weber, Cliff, and Taniguchi for the same reasons as the independent claims from which they respectively depend and further in view of their own respective features. Accordingly, Applicant respectfully requests that the rejection of claims 13, 22-24, 29, and 30 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Other Matters

Response to Examiner Arguments in Office Action

Although Applicants have traversed the rejections to claim 12 on other grounds, Applicants respectfully remind the Examiner that a feature of claim 12 recites "at least one of said programmable pads is configured to either send or receive said data *after* having been configured to comply with said data protocol and electrical specification."

(*emphasis added, see*, claim 12). The Office Action dated January 3, 2008 alleges that claim 12

does not preclude the programmable pad to be configured to send or receive data before being configured with the data protocol and electrical specification. The claim merely requires that the programmable pad is configured to send or receive data after said protocol and electrical configuration. In other words, the claim limitation does not preclude the scenario where the programmable pad is configured to send or receive data both before and after said protocol and electrical configuration. Therefore, [Applicants'] argument is invalid because there is no evidence that the programmable pads in the prior art are configured to send or receive data only before said protocol and electrical configuration.

(*emphasis in original, see*, Office Action, Pages 2-3).

Applicants respectfully disagree. The Examiner is attempting to read a claim limitation out of the claim. Applicants have demonstrated that the art of record does not teach or suggest "at least one of [the] programmable pads is configured to either send or receive said data *after* having been configured to comply with said data protocol and electrical specification." *See* Amendment and Reply Under 37 C.F.R. § 1.116 filed on September 17, 2007. The Examiner is entitled to give a claim its broadest reasonable interpretation but cannot simply ignore claim terms in so doing. The art of record does not teach (nor does the Examiner allege) that the pad is programmed *after* being configured.

New Claims

New claims 31-38 have been added. From the discussion above, Applicant has traversed the rejections to claim 12. Dependent claims 31-38 are likewise allowable for the same reasons as the independent claims from which they respectively depend and further in view of their own respective features.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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